United States Patent [19]

Wilkoff

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[54] **SURGICAL STENT METHOD AND APPARATUS**

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[52] **U.S. Cl.** **606/191**; 606/194; 606/198

[58] **Field of Search** 606/191, 194, 198, 200

[56] **References Cited**

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[57] **ABSTRACT**

A method for preventing arterial restenosis after angioplasty and including the steps of providing from a plastic material filament a base coil of a substantially uniform given diameter, inducing in the base coil an elastic memory that provides an inherent tendency thereof to return to the given diameter after any distortion, forming from the base coil a coil stent with a substantially uniform predetermined diameter substantially less than the given diameter, releasably coupling the coil stent to an elongated delivery device adapted to pass through a blood carrying vessel, inserting the coil stent and delivery device into a vessel, and manipulating the delivery device within the vessel so as to position the coil stent at a desired location therein. After placement, the coil stent is decoupled from the delivery device which is removed from the vessel, and the elastic memory is allowed to expand the coil stent into contact with the inner walls of the vessel and to the diameter substantially greater than the predetermined diameter. The use of an inherently expandable plastic coil stent permits the effective prevention of restenosis in small arteries typically found in the area of the heart.

21 Claims, 1 Drawing Sheet